REMARKS

Applicants thank the Examiner for total consideration given the present application. Claims 1-9 were pending prior to the Office Action. Claim 10 has been added through this Reply. Therefore, claims 1-10 are pending. Claims 1, 6, 7, 8, and 10 are independent. Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks.

35 U.S.C. § 103 REJECTION – HOSAKA IN VIEW OF KAWADA ET AL.

Claims 5 and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hosaka (USPN 4,625,697) (hereinafter "Hosaka") in view of Kawada et al. (USPN 3,656,043) (hereinafter "Kawada"). Applicant respectfully traverses.

For a Section 103 rejection to be proper, a *prima facie* case of obviousness must be established. *See M.P.E.P. 2142.* One requirement to establish *prima facie case* of obviousness is that the prior art references, when combined, must teach or suggest all claim limitations. *See M.P.E.P. 2142; M.P.E.P. 706.02(j).* Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In this instance, Hosaka fails to teach or suggest each and every claimed element. For example, dependent claim 5 includes features from independent claim 1 which recites, *inter alia*, "A control system for controlling a control quantity of a subject to be controlled, said control system comprising *...a timing judgment section for sequentially determining a time duration of each specific kinds of behaviors of the controlled subject based on the values of the control quantity acquired by the control quantity acquisition section; a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behaviors of the controlled subject matches from among multiple behavior patterns based on the values of the control quantity acquired by the control quantity acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section; ....*" *Emphasis added.*

Hosaka fails to teach or suggest each and every claimed element. Hosaka merely teaches a operation timer circuit for interrupting a CPU operation (col. 20, lines 18-28). More specifically, the operational timer circuit controls the CPU's executable program, which keeps track of time intervals between engine control program so as to control the sequential execution of a plurality of control programs. Nowhere does Hosaka teach or suggest "*a timing judgment section for sequentially determining a time duration of each specific kinds of behavior*," as recited in claim 1.

In addition, Hosaka merely teaches a method of recording engine operation patterns and projecting probable engine operation subsequent to specific engine operation conditions. Although Hosaka teaches detecting an engine operation pattern and comparing the detected pattern to a model pattern to derive projected engine operation (col. 4, lines 16-46), Hosaka fails to teach or suggest that the engine operation pattern is linked to the time duration of the engine operation pattern. More specifically, Hosaka fails to teach or suggest "*a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behaviors of the controlled subject matches from among multiple behavior patterns based on the values of the control quantity acquired by the control quantity acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section.*" Therefore, Hosaka's control system is incapable of controlling a controlled subject based on control quantity acquired during the time duration of each of the behaviors sequentially determined by the timing judgment section.

Furthermore, a combination of Hosaka with Kawada as applied to claim 5 in the Office Action fails to cure the deficiency of Hosaka. Kawada merely teaches an automated steering control of a ship or vessel by constant tracking of turning or course changes represented by angular velocity, rate time, and deviation angle from a set course. Any deviation in vessel's heading causes steering to set angular velocity and rate time to return to the set course (col. 2, line 29 – col. 3, line 10). Kawada also teaches an overshoot minimization during automatic steering by differential variation of rate time while monitoring angular velocity to steer the vessel to a correct heading.

Therefore, the asserted combination of Hosaka and Kawada (assuming these references may be combined, which applicant does not admit) fails to establish prima facie obviousness of any pending claims.

Therefore, for at least these reasons, claims 5 and 9 are distinguishable from the combination of Hosaka and Kawada.

Applicant respectfully requests that the rejection of claims 5 and 9, based on Hosaka and Kawada, be withdrawn.

NEW CLAIM

Claim 10 has been added through this reply. Claim 10 incorporates subject matter defined in claim 5. The system claimed in Claim 10 specifically controls a ship based on a heading of the ship. For example, claim 10 recites, *inter alia*, "A control system for controlling a heading of a ship to be controlled, said control system comprising ... *a timing judgment section for sequentially determining a time duration of each of specific kinds of behaviors of the ship based on the values of the heading of the ship acquired by the heading of the ship acquisition section*; ... *a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behaviors of the controlled ship matches from among multiple behavior patterns based on the values of the heading of the ship acquired by the heading of the ship acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section*; ...."

In this instance, Hosaka fails to teach or suggest each and every claimed element. Hosaka merely teaches a operation timer circuit for interrupting a CPU operation (col. 20, lines 18-28). More specifically, the operational timer circuit controls the CPU's executable program, which keeps track of time intervals between engine control program so as to control the sequential execution of a plurality of control programs. However, nowhere does Hosaka teach or suggest "*a timing judgment section for sequentially determining a time duration of each of specific kinds of behaviors of the ship based on the values of the heading of the ship acquired by the heading of the ship acquisition section*," as recited in claim 1.

In addition, Hosaka teaches a method of recording engine operation patterns and projecting probable engine operation subsequent to specific engine operation conditions. Although Hosaka teaches detecting an engine operation pattern and comparing the detected pattern to a model pattern to derive projected engine operation (col. 4, lines 16-46), Hosaka fails to teach or suggest that the engine operation pattern is linked to the time duration of the engine operation pattern. More specifically, Hosaka fails to teach or suggest "*a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behaviors of the controlled ship matches from among multiple behavior patterns based on the values of the heading of the ship acquired by the heading of the ship acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section.*" Therefore, Hosaka's control system is incapable of controlling a controlled subject based on control quantity acquired during the time duration of each of the behaviors sequentially determined by the timing judgment section.

Furthermore, a combination of Hosaka with Kawada as applied to claim 5 in the Office Action fails to cure the deficiency of Hosaka. Kawada merely teaches an automated steering control of a ship or vessel by constant tracking of turning or course changes represented by angular velocity, rate time, and deviation angle from a set course. Any deviation in vessel's heading causes steering to set angular velocity and rate time to return to the set course (col. 2, line 29 – col. 3, line 10). Kawada also teaches an overshoot minimization during automatic steering by differential variation of rate time while monitoring angular velocity to steer the vessel to a correct heading.

It has been shown above that neither Hosaka nor Kawada alone or in combination, may not be relied upon to show at least these features. Therefore, claim 10 is distinguishable over the cited references. Applicant respectfully requests that the claim 10 be allowed.

35 U.S.C. § 102 REJECTION – HOSAKA

Claims 1-4 and 6-8 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Hosaka. Applicant respectfully traverses this rejection.

For a Section 102 rejection to be proper, the cited reference must teach or suggest each and every claimed element. *See M.P.E.P. 2131; M.P.E.P. 706.02.* Thus, if the cited reference fails to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In this instance, Hosaka fails to teach or suggest each and every claimed element. For example, independent claim 1 recites, *inter alia*, "A control system for controlling a control quantity of a subject to be controlled, said control system comprising *...a timing judgment section for sequentially determining a time duration of each specific kinds of behaviors of the controlled subject based on the values of the control quantity acquired by the control quantity acquisition section; a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behaviors of the controlled subject matches from among multiple behavior patterns based on the values of the control quantity acquired by the control quantity acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section; ....*" *Emphasis added.*

Hosaka fails to teach or suggest each and every claimed element. Hosaka merely teaches a operation timer circuit for interrupting a CPU operation (col. 20, lines 18-28). More specifically, the operational timer circuit controls the CPU's executable program, which keeps track of time intervals between engine control program so as to control the sequential execution of a plurality of control programs. Nowhere does Hosaka teach or suggest "*a timing judgment section for sequentially determining a time duration of each specific kinds of behavior,*" as recited in claim 1.

In addition, Hosaka merely teaches a method of recording engine operation patterns and projecting probable engine operation subsequent to specific engine operation conditions. Although Hosaka teaches detecting an engine operation pattern and comparing the detected pattern to a model pattern to derive projected engine operation (col. 4, lines 16-46), Hosaka fails

to teach or suggest that the engine operation pattern is linked to the time duration of the engine operation pattern. More specifically, Hosaka fails to teach or suggest "*a behavior pattern judgment section for sequentially determining a behavior pattern which each of the behaviors of the controlled subject matches from among multiple behavior patterns based on the values of the control quantity acquired by the control quantity acquisition section during the time duration of each of the behaviors sequentially determined by the timing judgment section.*" Therefore, Hosaka's control system is incapable of controlling a controlled subject based on control quantity acquired during the time duration of each of the behaviors sequentially determined by the timing judgment section.

Therefore, for at least these reasons, independent claim 1 is distinguishable from Hosaka. Claims 2-4 and 6-8 depend from claim 1, directly or independently. Therefore, for at least the reasons stated with respect to claim 1, claims 2-4 and 6-8 are also distinguishable from Hosaka.

Accordingly, Applicant respectfully requests that the rejection of claims 1-4 and 6-8, based on Hosaka, be withdrawn.

Conclusion

In view of the above remarks, it is believed that claims are allowable.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael R. Cammarata Reg. No. 39,491 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By _____

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